

## Designer Drugs "Eve" and "Ecstasy" Linked to Deaths

A recent article in *JAMA* reports on five deaths associated with the use of two controversial designer drugs that are chemical cousins of methamphetamine, or "speed"—MDEA, popularly known as "Eve," and MDMA, known as "Ecstasy."

In three cases, the drugs may have contributed to death by inducing heart arrhythmias in individuals with underlying natural disease, conclude Graeme P. Dowling, M.D., now of the Universities of Calgary and Alberta, Canada, and colleagues at the University of Texas Health Science Center, Dallas, and Southwestern Institute of Forensic Science, Dallas. In another patient, MDMA use preceded an episode of accidental death, the study says, while in the fifth case, MDMA "was the immediate cause of death," also arrhythmia-related.

"Death as a consequence of the use of these drugs appears to be rare, but it does occur; this outcome may be more common in individuals with underlying cardiac disease . . . It is hoped that the reporting of these cases will inaugurate a search for more objective information about MDMA and MDEA," the study says.

MDMA has been a popular recreational drug at least since the early 1980s. Also used by some psychiatrists as an adjunct to therapy, it is said to be "a pleasant way to get in touch with oneself," say the researchers, causing euphoria and enhanced sociability. It was available legally until July 1, 1985, when federal drug officials, citing its abuse potential and possible neurotoxic effects, ordered MDMA classified as a controlled substance.

While MDMA is still available on the illicit drug market, MDEA has appeared as a non-controlled substitute. MDEA is reported to have milder but similar effects to MDMA, the study reports. Both drugs are structurally similar to MDA, which has been shown to selectively damage nerve terminals in rats.

The five cases in which MDMA or MDEA was thought to have caused or contributed to death were seen over a nine-month period in the Dallas area. The victims included four men and one woman and ranged in age from 18 to 32 years.

In one case, a 22-year-old man apparently fell to his death after climbing a utility tower and coming into contact with a high-voltage power line. The man had ingested an unknown quantity of MDMA the previous evening, the report says.

In two other cases, involving a 25-year-old man found to have had MDEA in his system and a 21-year-old man who had ingested MDMA, the victims had underlying heart problems, the researchers report. "Although their cardiovascular effects are unknown, MDMA and MDEA may well have actions similar to their parent amphetamines,

including increased cardiac output, hypertension and induction of arrhythmias." These cases are similar to an MDMA-related death reported in the popular press, the study notes. In another case, it says, MDEA use was associated with the sudden death of a 32-year-old man who had asthma, and "one cannot rule out the possibility that MDEA potentiated a cardiac arrhythmia in this individual whose cardiopulmonary function was already impaired."

The final case involved an 18-year-old woman who was healthy prior to her death, which followed ingestion of a small amount of MDMA and alcohol. She suffered a cardiac arrhythmia and could not be resuscitated, the researchers say.

"Unfortunately, these five cases do little to resolve the present controversy as to abuse potential and dangers of MDMA and MDEA vs. the possible therapeutic usefulness of MDMA in psychotherapy," the study concludes. "Deaths directly and indirectly related to the use of MDMA and MDEA do occur; however, they appear to be rare at this time. It would appear the pre-existing cardiac disease may be one factor that predisposes individuals to sudden death when using these drugs."

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## AMA Council Recommends Smoke Detectors

Smoke detectors represent one of the least expensive and most effective means of providing early warning of fires, and may substantially reduce personal injury and death, according to a report from the AMA Council on Scientific Affairs, published recently in *JAMA*. The chance of death in homes without detectors is 2.5 times higher than those

with the devices, the report adds.

While there is insufficient evidence to gauge the reliability of residential sprinkler systems, industrial/commercial systems show an outstanding record, observes the report, which was adopted at the June 1986 annual meeting of the AMA House of Delegates.

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